

User's Manual

**DIGITAL CABLE NETWORK TERMINAL
WITH COMMON INTERFACE**

CSR 3402 QAM



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AC power switch is on the rear panel of the receiver.



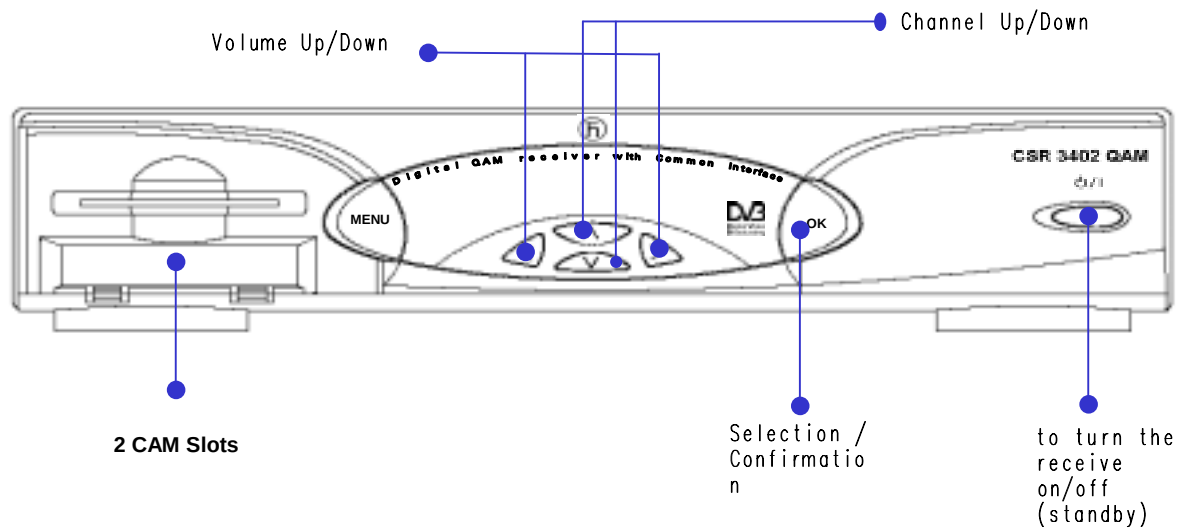
Trade Mark of the DVB Digital Video Broadcasting Project (1700)

1. Features

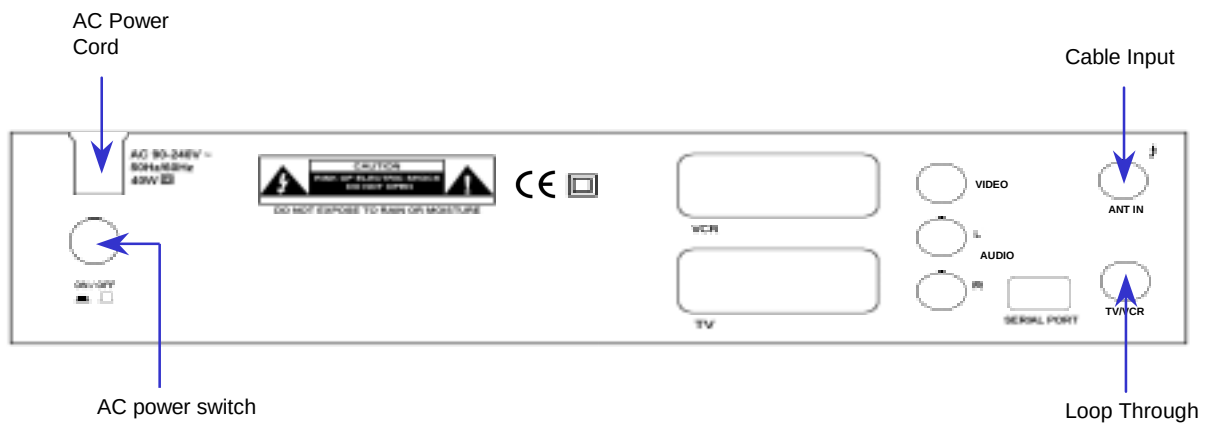
1. MPEG 2 Video(MP@ML)
2. MPEG 1 Audio Layer 1, Layer 2
3. MPEG-2 Digital & Fully DVB Compliant
4. Capable of Interfacing the CAMs of DVB Common Interface Standard
5. Automatic Channel Set-up for CATV network
6. Capable of Auto scanning the frequency for QPSK to QAM Conversion system
7. QAM demodulation
8. On-Screen Display with 256-Color Full Resolution
9. LD Quality Video, CD Quality Audio
10. Plug & Play Installation
11. Parental lock
12. RS232C port for additional information service and updating IRD control software
13. 4-digit 7-segment LEDs on the front panel displays channel information
14. Displays Local Time on the front panel, when it is on stand-by mode
15. Power recovery function
16. 64-Step Volume control
17. Favorite channel function
18. User friendly OSG menu with full function
19. IR remote control
20. Last channel memory function
21. Variable aspect ratio (4:3, 16:9) with Pan vector
22. EPG for on-screen channel information
23. Receiver-to-Receiver function for operating program and data transfer.

2. Front & Rear View

FRONT PANEL

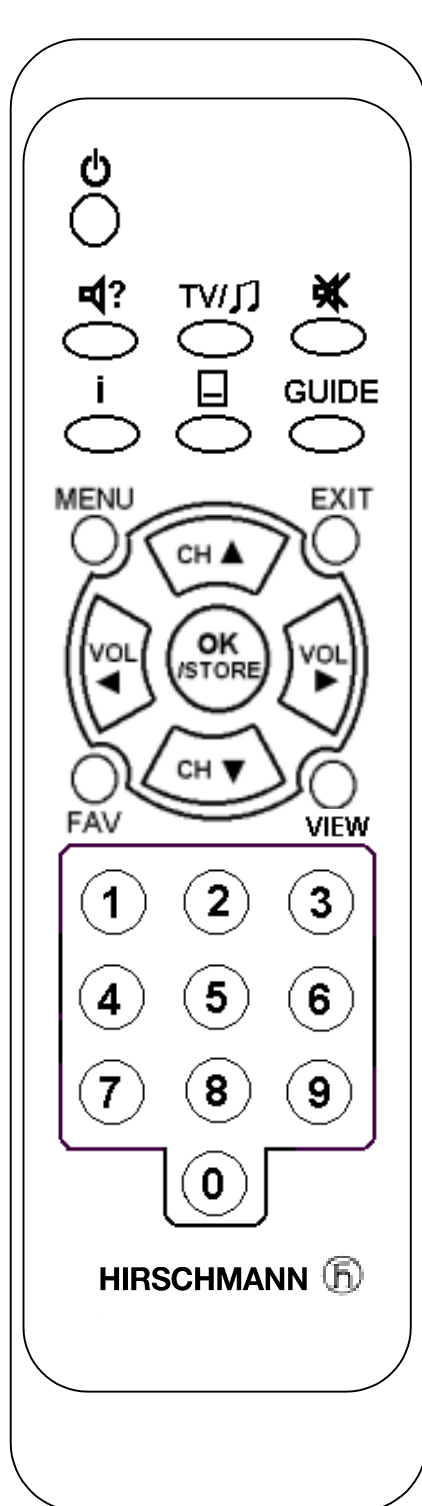


REAR PANEL



Note) All cables used for connecting the receiver should be well-shielded type cable.

3. Remote Control Unit (RCU)



Switches the Receiver ON/OFF



Switches the sound ON/OFF.

VIEW

Shows a thumb nail representation of the current channel in the “Edit TV Channel”, “Parental Lock” and “TV Guide”.



Select the audio language or the sound track you want among data to be transmitted from the satellite.
To return to current channel, press or EXIT.

TV/R

Switches between TV/Radio mode.



Shows program information provided by the broadcaster



Shows Subtitle menu to select the subtitle language.

GUIDE

Shows the list of available channels.
(Only available when provided by the broadcaster)

MENU

When you want to see the main menu or return to the previous menu.

EXIT

Return to the current video viewing at any time

FAV

Shows your favorite channels edited.
(Before the operation, FAV edition should be done in “Edit TV channel” menu.)

OK

Selection of program, highlighted line or parameter value.
Also, you can see TV/Radio channel list while watching TV or listening to Radio channel.



Channel Up



Channel Down



Volume Up (Page Up)



Volume Down (Page Down)

0 . 9

Direct choice of TV / Radio channel and other commands by numeric keys.

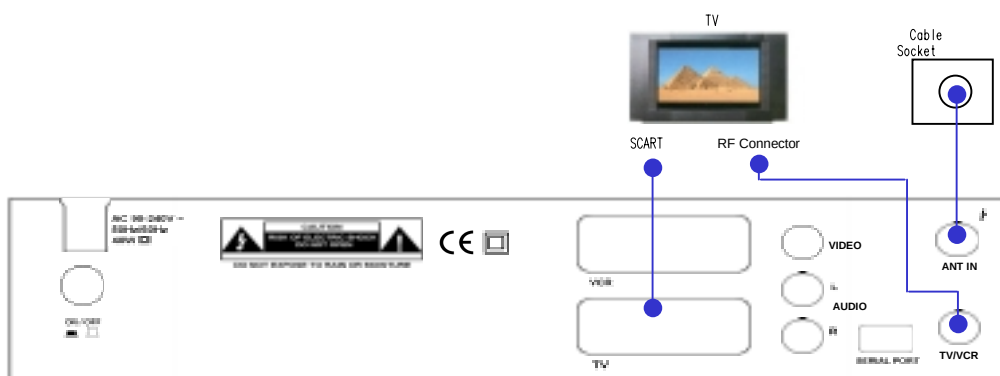
4. Getting Started

Please do NOT PLUG the receiver into Mains until you finish making all connections to the unit.

Connect the coaxial cable from the Cable socket into ANT IN socket of the receiver.
(Connector should be adapted finger-tight.)

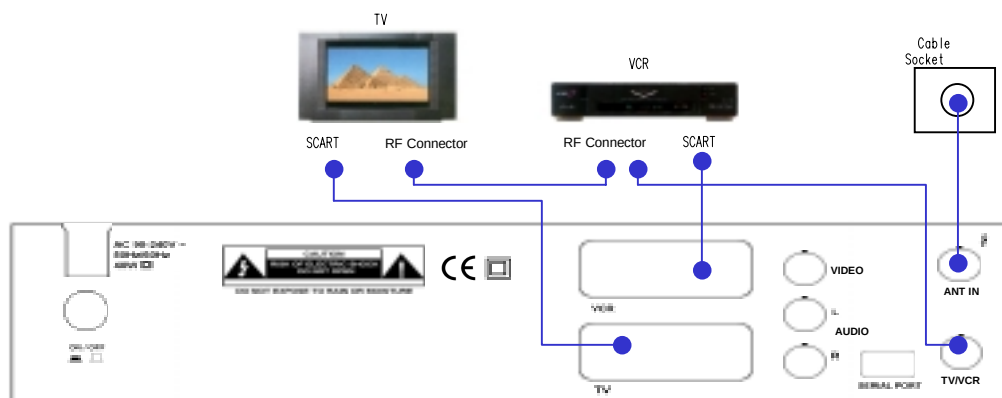
Receiver to TV with SCART

- Connect the “TV” SCART on the receiver with the SCART of TV.

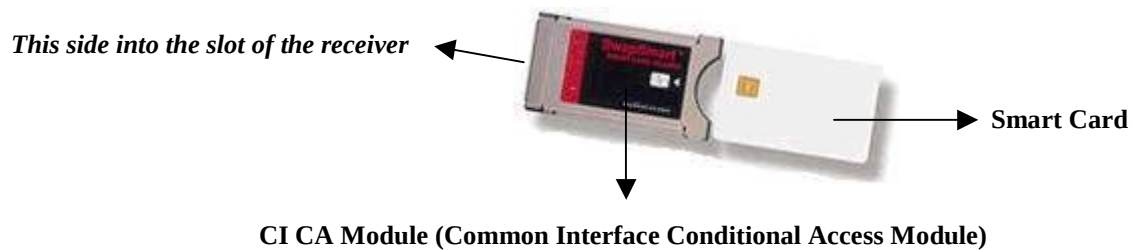


Receiver to VCR, TV with SCART

- Connect the “TV” SCART on the receiver with the SCART of TV.
- Connect the “VCR” SCART on the receiver with the SCART of VCR.



Smart Card and CI CA Module



To watch payable program channels, a CI CA Module and a smart card of specific service provider are necessary. You may ask for these to the shop which you had purchased the receiver.

In case you subscribed to more than one service provider, you should insert proper CI CA Module with matching smart card to get access to each bouquet. This receiver shall accept two CI CA Modules with two smart cards at the same time.

If any CI CA Module with smart card is not inserted in the receiver, only free (FTA; free-to-air) programs are available.

Here's how to get access to the pay channels after your subscription to the provider and your purchase of the CI CA Module.

- 1) The main plug must not be plugged in before inserting the CI module.
- 2) Insert proper CI CA Module fully into the slot behind the lid inside of the front door of the receiver, towards the arrow on the module facing upwards and inwards.
- 3) Insert your smart card fully into the slot on the CI CA Module towards the arrow on the card facing upwards and inwards.
- 4) CI CA Module and smart card may give special menus or information which are not described in this manual.
- 5) Smart card can only give access to the program channels from specific service provider of your subscription.

5. Operation and Menu Program

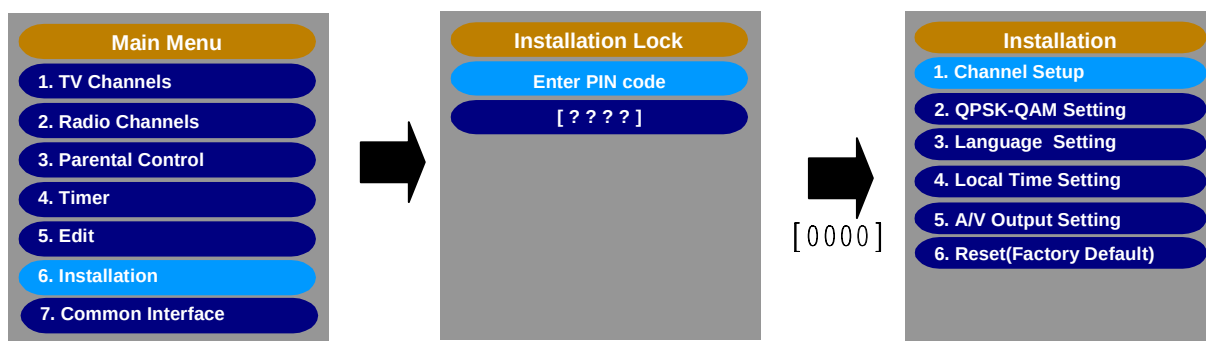
Main Menu

Press  on the remote control unit (RCU).
(or press /I on the front panel of the receiver)
Press MENU to display Main Menu on the screen.

Select menu using channel up/down keys or numeric keys.
Please note that OK is always a confirmation of your selection.
To return to the previous menu, press **MENU**.



Installation



The initial code is set as **[0000]** and you can change it (see “Change PIN code” in page 10).

· Above menu for inputting the PIN code is displayed only when the Installation & Edit Lock is set as [ON].

Channel Setup

There are 3 kinds of search type.

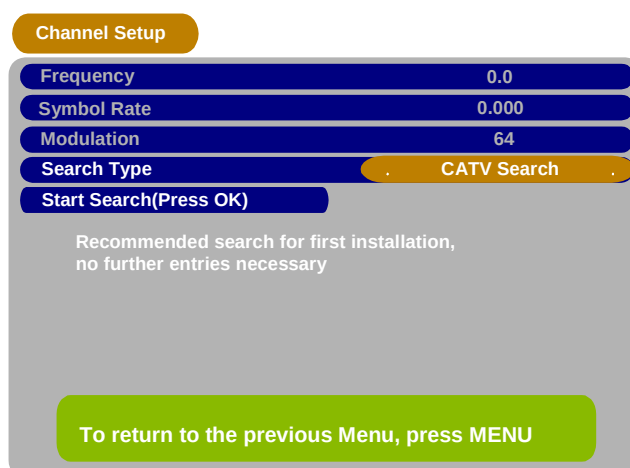
- 1) CATV search
- 2) Manual search
- 3) QPSK-to-QAM search

You can select the search type by pressing  ,  key on the Search Type bar.

CATV Search

By selecting this search type, the receiver will search the TV and Radio channels digitally transmitted from the cable network automatically .

Then, press **OK** button on the “Start Search” bar, the search will be started. Refer the Channel Search menu on the page No. 8.



Manual Search

By selecting this search type, you can search the channels by inputting the parameter for Frequency, Symbol Rate and Modulation type.

After inputting the parameters, press **OK** button on the “Start Search” bar, the search will be started. Refer the Channel Search menu

* In order to use this Search Type, you need the exact information of the channels.

Channel Setup

Frequency	0.0
Symbol Rate	0.000
Modulation	64
Search Type	Manual Search
Start Search(Press OK)	

Search for Single Cable Network
Symbol Rate, QAM Modulation and Cable Network
center frequency have to be entered

Signal Quality 55%

To return to the previous Menu, press MENU

QPSK-to-QAM Search

To search the channels by this type, first you should input the parameters on the QPSK-to-QAM Setting menu. Then, select QPSK-to-QAM search on the “Search Type” bar with **.**, **.** keys.

Channel Setup

Frequency	0.0
Symbol Rate	0.000
Modulation	64
Search Type	QPSK-to-QAM Search
Start Search(Press OK)	

Free parameter configuration,
long search time possible.

To return to the previous Menu, press MENU

QPSK-to-QAM Setting

Start Frequency	114.0
Stop Frequency	858.0
Symbol Rate1	6.900
Symbol Rate2	6.875
Symbol Rate3	6.111
Symbol Rate4	0.000
Symbol Rate5	0.000

Modulation	16	32	64	128	256
	☐	☐	☒	☐	☐

To return to the previous Menu, press MENU

After selecting the search type, and press the **OK** button. Then, the Channel Search will be started.

Channel Search

TV Channels

153. ARTE
154. CARSAT
155. Beta BC
156. BD1
157. TAQUILLA 6
158. TAQUILLA 7
159. TAQUILLA 8
160. ESTILO

Radio Channels

41. MUSICALS
42. REQQAE
43. COUNTRY
44. NEW CNTRY
45. LATIN
46. KL. SYMPHON
47. KLASSIK
48. OPER

Channel Searching Status

0% 50% 100%

Index	Frequency	Symbol Rate	Modulation
1	410	6.900	64

Language Setting

You can select the desired language for the OSG (On-Screen Graphics) display using the **Left**, **Right** keys when the “Menu Language” option is selected. Similarly you can select a different audio channel when the “Audio Language” option is selected. This option allows you to select a different language to listen to if supported.

Language Setting

Menu Language	English
Main Audio Language	English
2nd Audio Language	English
Subtitle Language	English

To return to the previous Menu, press MENU

Subtitle

Select “Subtitle language” at “Select Language Setting” menu.

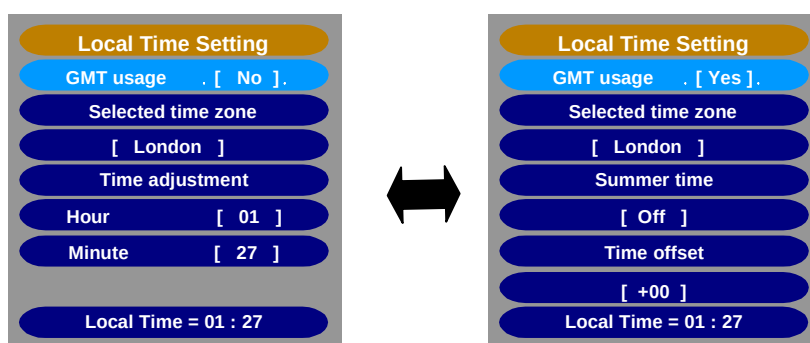
While watching your wanted channel, the subtitle shall be displayed only when the selected subtitling language is provided by the broadcaster.

To check if subtitle language is available, press “” key on the remote control unit, then all the available subtitle languages will be shown on the screen.

Subtitle

None
Eng
Ita

Local Time Setting



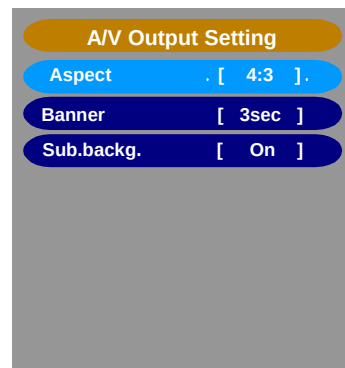
* If GMT is provided by the broadcaster, you may get the time using the GMT provided by broadcaster (or) you may get your own time. (Please be aware that the GMT information provided by the broadcaster may not be correct sometimes.)

A) If GMT is provided, select “Yes” for GMT usage, the area of the selected place(time zone) and summer time On/Off. You can adjust the time from +59 to -59 minutes by using the Time offset.

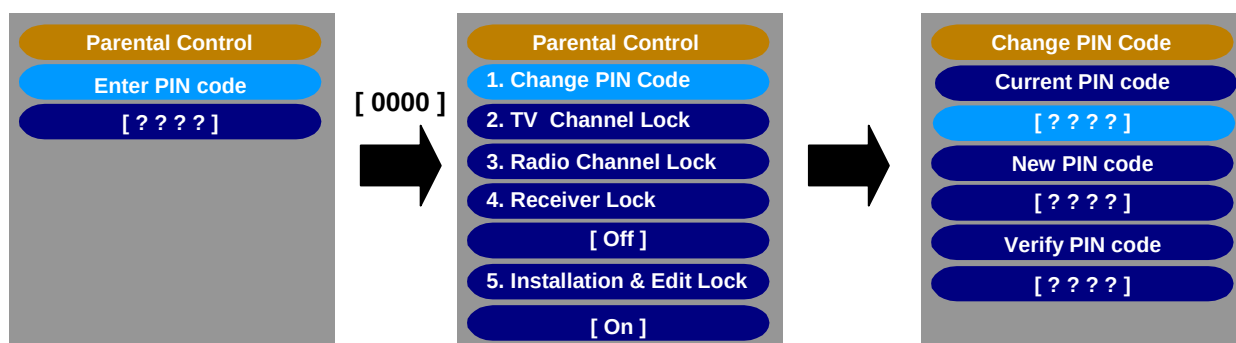
B) If GMT is not provided or you want to set the time yourself, select “No” for GMT usage, the area of the selected place(time zone) and set your local time using volume up/down keys (**Left**, **Right**).

A/V Output Setting

Aspect	Please select your TV format. 4:3 for normal screen TV 16:9 for wide screen TV
Banner	You can select OSG viewing time of the information about the current channel & program among 2/3/4/5/6/8/10secs by using volume up/down keys.
Sub.backg.	Select 'On' for Subtitle background on TV (Subtitle background).



Parental Control



Change PIN Code

Preprogrammed PIN (Personal Identification Number) code is set as [0000]. If you want to change it, please follow the procedure shown above.

Receiver Lock

If Receiver Lock is set as [On], you have to input the correct code to operate the Receiver.

Installation & Edit Lock

You can not enter directly into Installation menu and Edit menu when Installation & Edit Lock is set as [On].

TV Channel Lock

Press **OK** to lock / unlock the selected channel.
Locked channels will be skipped when scrolling through channels.

Note) The color of the highlighted bar turns to Grey when it is on a locked channel.
You can see the current channel display on this menu. If you want to view the current TV channel, press “**VIEW**” key on the remote control.

TV Channel Lock

SMATV

TV Channels

33. PARIS PREMIERE
34. VOYAGE
35. CONTACT TV
36. LC I
37. Canal J
38. DF1 Info-Kanal
39. Star Kino
40. CNN



Channel Unlocked

To return to the previous Menu, press MENU

TV Channels

You can select the channel you would like to watch either by pressing the numeric keys for the channel number or by moving the highlighted bar to the channel of your choice using the **↑**, **↓** keys. Press the **OK** key to select the channel.

* Press the **↑**, **↓** keys to move one page up or down.

+ : to High channel, **-** : to Low channel

TV Channels

11. Paris Premere
12. Voyage
13. Contact TV
14. LC I
15. Canal J
16. DF 1 Info-Kanal
17. Star Kino
18. CNN

Radio Channels

You can select the channel you would like to watch either by pressing the numeric keys for the channel number or by moving the highlighted bar to the channel of your choice using the **↑**, **↓** keys. Press the **OK** key to select the channel.

* Press the **↑**, **↓** keys to move one page up or down.

+ : to High channel, **-** : to Low channel

Radio Channels

11. Hit Liste
12. Blues
13. Classic Rock
14. Soft Rock
15. Generation Lock
16. Love songs
17. Dance
18. REE

Timer

You can reserve the Turn On, Turn Off time of the receiver and sleep time on this menu

Timer

Turn on . [Off] .

[-- : --]

Turn off . [Off] .

[-- : --]

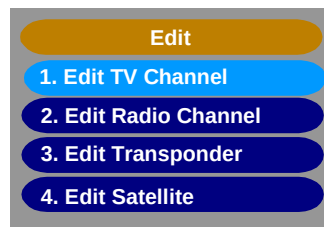
Sleep time (Minute)

. [Off] .

Local Time = -- : --

Edit

You cannot enter this menu if the Installation & Edit Lock is [ON].
The initial code is set as [0000] and you can change it (see “Change PIN code” in page 10).

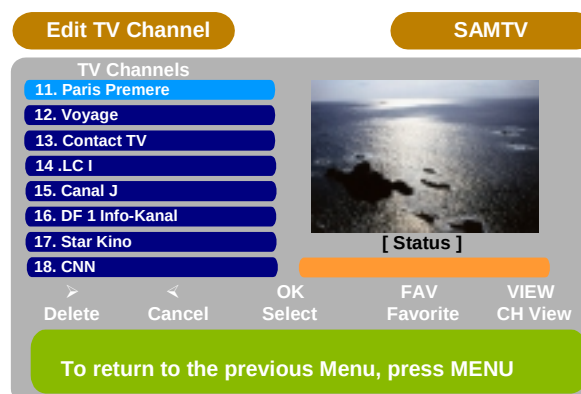


Edit TV Channel

You can move to the channel that you want to edit by using the . , . keys.

Also you can move to the highlighted bar directly by inputting the channel number.

Press the **OK** key to select the channel you want to edit, and then you can move the channel to the position you want or delete it. If you want to view the current TV channel, press “**VIEW**” key on the remote control.



FAV Channels

You can create a group of up to 96 channels in the “**Edit TV Channel**” or “**Edit Radio Channel**” menu.

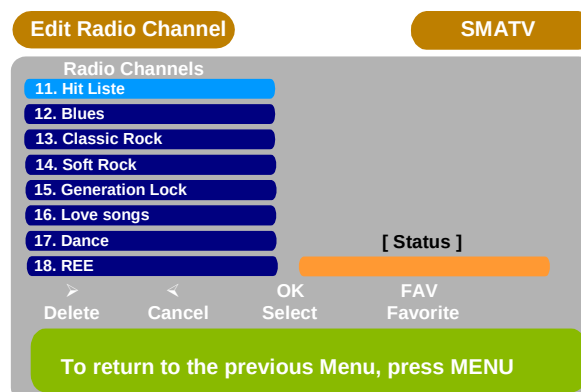
To include a channel in the FAV list, select a channel and press the blue key on the remote control.

To select a favorite channel from the FAV list, press the FAV key.

To view a thumb nail representation of the currently selected channel, press the VIEW key on the remote control.

Edit Radio Channel

Use the same procedure for the Radio Channels as used for editing the TV Channels as above.



Edit CH name & PID

To edit a channel name(add, change) and PID (Packet Identifier), you should use this menu.

On the channel name bar, you can add or change the channel name by pressing the OK key. If you press OK key, the Graphic Keyboard will be displayed. After add or change the channel name, press OK key on the SAVE button on the Graphic Keyboard. Also, you can change the PID number on this menu.

Edit CH name & PID

SMATV

Frequency	114.0
SR//Modulation	0.000/64
Channel Name	????????
Video PID	0
Audio PID	0
PCR PID	Auto

To return to the previous Menu, press MENU

Erase Cable Network

To delete a Cable Network, press the ➤ key when the highlighted bar is located at the cable network you want to delete.

Erase Cable Network

SMATV

NetworkList	Channel List
1. 114.0 MHz	.. No Channel ..
2. 122.0 MHz	
3. 130.0 MHz	
4. 138.0 MHz	
5. 146.0 MHz	
6. 154.0 MHz	
7. 162.0 MHz	
8. 170.0 MHz	

➤
Delete

Network to be deleted

To return to the previous Menu, press MENU

Common Interface

“**Common Interface**” menu provides information and additional menu about the CI CA Module inserted in the receiver. This information may vary depending on the information by the service provider. Please see the documentation delivered together with your CI CA Module.

Maximum two CI CA Modules are acceptable with this receiver.

Common Interface

Slot 1 : Module not installed
Slot 2 : Module not installed

To return to the previous Menu, press MENU

ALT Audio

If more than one audio channel is provided by the broadcaster on a specific channel, you can activate the audio mode display by pressing the  key.



TV Guide

While watching or listening to any channel and you want to know more information regarding the program shown, press the **GUIDE** key on the remote control to display the “**TV Guide**” or the “**Radio Guide**”. This information may be provided by the broadcaster. You can move to another channel by pressing the  ,  keys.

TV Guide			
		Now	
1. Nordic TNT	The Lone Star	19:15 . 20:59	
2. Nordic Cartoon	Godzilla	20:30 . 21:00	
3. Kanal 5	Oprah Wintrey	20:15 . 21:10	
4. Sky News (Cable	Money	20:30 . 21:00	
5. Discovery	Weapons Of War .	20:00 . 21:00	
6. Animal Planet	Animal doctor	20:30 . 21:00	
7. Fox Kids	The Puzzle Place .	20:30 . 21:00	
8. RAI1	Linea verde - In	20:19 . 20:55	
TV/Radio			
Radio	Next	more Info	
Current Time = 20 : 55			

TV Guide



RAI1

natura : Linea verde - In diretta della natura
Un programma di Sandro Vannucci a cura di
Gian Stefano Spoto produttore esecutivo
Gianpiero Ricci
20:19 . 20:55

MENU

Back

OK

Select

Please refer to the function of the keys.

- 1) **TV/Radio** key : Switches the “**TV Guide**” and the “**Radio Guide**” by pressing this key.
- 2) **NowNext** key : Switches the guides of “Now” and “Next”
- 3) **I (Info)** key : Shows detailed information of the selected channel.

Reset (Factory Default)

If you want to reset all the data edited, press **OK** twice.

Reset (Factory Default)

* If you want Factory Reset, press OK.

***CAUTION :** All the information of satellite and transponder to be edited by the user will be initialized by this process.

To return to the previous Menu, press MENU

6. Specifications



1. Tuner & Channel

Input Connector	1 x IEC female
Loop through Connector	1 x IEC male
Frequency Range	47MHz To 862MHz
Waveform	QAM : 16, 32, 64, 128, 256
Symbol rate	1 ~ 7MS/s
Input signal level	47dB uV ~ 75dB uV for each channel
Input imperdance	75 ohms nominal
Loop through out imperdance	75 ohms nominal
Loop through gain	0 dB typ.
Center frequency	36.15MHz nominal
Bandwidth	8MHz typ.

2. MPEG Transport Stream A/V Decoding

Transport Stream	MPEG-2 ISO/IEC 13818 Transport Stream Specification
Profile & Level	MPEG-2 MP@ML
Input T/S Data Rate	90Mbit/S Max.
Aspect Ratio	4:3, 16:9 with Pan vector
Video Resolution	720 x 576(PAL), 720 x 480(NTSC)
Audio Decoding	MPEG-1 Audio Layer 1,2, Musicam
Audio Mode	Stereo, Dual Channel, Joint Stereo, Mono
Sampling Rate	32, 44.1 and 48KHz

3. Memory

Flash Memory	up to 2Mbytes
Program DRAM	8 Mbytes
EEPROM	2 Kbytes

4. A/V & Data In/Out

SCART	TV x 1, VCR x 1
RGB Video Out	TV Scart
CVBS Video Out	2 x Scart socket(TV, VCR) ,RCA x1
Analog Audio Out	2 x Scart socket(TV, VCR) ,RCA x 2(L,R)
	Resolution 16bit DAC
	Output Level 2Vrms Max.
	Volume & Mute Control
Data Interface	RS232C, BAUD Rate 115200 Max., 9Pin D-SUB



5. PCMCIA

Number of Slot	2
Type	I, II DVB Common Interface Standard

6. Power Supply

AC Power Switch	Push lock type(toggle)
Input Voltage	AC90 – 240V, 50/60Hz
Type	Linear PWM
Power Consumption	40W Max.(Below 7W Max. For Standby Mode)
Protection	Separate Internal Fuse and Chassis Grounding The Input shall have lightning or Electric Shock Protection.

7. Physical Specification

Size(W x H x D)	320mm x 60mm x 240mm
Weight	about 2.0 Kg

8. Environment

Operating Temperature	+5。 C +50。 C
Storage Temperature	–40。 C +65。 C